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ABSTRACT

Designed for public policy makers and their counterparts in business and education, this monograph focuses on the role of community colleges in the economic development process. This study shows two-year community, junior, and technical colleges can play a greater active role in this process than ever before. Section 1 argues that economic development requires the time, resources, and efforts of private-sector businesses and financiers, public and private economic development agencies and groups, and colleges and professional associations. This section also looks at the economic development capabilities of two-year colleges. After recommending that community colleges be made early and active partners in the strategic planning process, section 2 considers the community college's role in developing, marketing, and implementing an economic development plan. Section 3 offers examples of two-year colleges providing "one-stop assistance" for business through, for example, entrepreneurship and technical training, business assistance centers, small business centers, other small business help, foreign trade, and contract procurement. Section 4 briefly describes ways in which two-year colleges can help business and industry to incorporate new technologies into their operations through training, applied research, education, and demonstrations. Section 5 discusses the role of two-year colleges in occupational skills training, pointing to North and South Carolina's examples of statewide industrial training efforts; innovative funding approaches used in other states; and the role of the Job Training Partnership Act. Sections 2 through 5 conclude with recommendations for development agencies, college administrators, and business leaders. Finally, section 6 outlines the benefits for all participants in the economic development process. (UCM)

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The Development Triangle:

Community College Assistance for Economic Growth

Ian McNett

Northeast-Midwest Institute

Education-Economic Development Series

6

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Preface

This monograph focuses on the role of community colleges in the economic development process. The preceeding five monographs in the series explored ways to improve collaboration between educational institutions and business and industry. Two-year colleges offer particular strength and resources that can be applied to the economic development process itself--the attraction, retention, and expansion of industry and economic opportunity in a particular area.

This study shows that two-years community, junior, and technical colleges can play a much more active role in the economic development process than ever before. Public and private organizations that promote economic growth can depend on the colleges for a variety of services--planning, management advice, the application of new technologies in the workplace, and training.

Each sector of education has a role to play in promoting economic growth. Each has different strengths, resources, and primary constituencies. Two-year colleges by design serve their local communities. The colleges are physically close to the industries they serve, and may seem more accessible to local economic development officials than four-year institutions. In addition, many of the colleges are part of a statewide system, which enables planners to develop comprehensive economic development strategies tailored to fit local needs. Many two-year colleges also have an occupational orientation that makes them ideal partners in an economic development process.

This monograph is aimed at the economic development community, as well as educators and elected officials. It explores a range of ways that two-year colleges can participate in economic development and suggests policies and actions to foster effective partnerships. Drawing on the experience of a number of individual colleges and statewide systems, many in the Northeast-Midwest region, it illustrates the ways such partnerships can work.

This is the sixth volume in a series designed to promote stronger ties between the region's educational resources and the economic development process. Focusing on a single critical issue, each monograph encourages public policy makers and their counterparts in business and academic institutions to translate available ideas into pragmatic solutions. The series explores strategies that touch all educational levels, from local K-12 public school systems to higher education.

This education-economic development series is made possible through the generous support of the American Can Company Foundation.

1. The Economic Development Triangle

"Economic development" has been defined in various ways over the years. Basically it is the process by which interested individuals and organizations are inspired to invest capital in an area. The resulting economic activity generates or expands industrial, commercial, or service enterprises, creates new jobs, and retains others. Economic development is not a spontaneous process; optimum sequence of events occurs only within the proper "environment"--one conducive to investment. Several elements are necessary, including a suitably educated and trained work force, a public-sector capacity to help development, and support services such as technical advice and management counsel.

Increasingly, this process requires time, resources, and work from three diverse participants in several sectors--private-sector businesses and financiers, public and private economic development agencies and groups, and resource institutions and organizations such as colleges and professional associations. Together, they form an "economic development triangle" that serves as a catalyst for local and regional economic expansion.

Economic development is not a one-way street for any of the partners. Every member of the triangle contributes to and reaps benefits from their collaboration. Economic development groups--state and local agencies, private industry councils, chambers of commerce, and other organizations--are one side of the triangle. They are responsible for marshaling the resources and establishing the alliances needed to mount a successful economic development effort. To create the strategy and plan for a strong program, these groups use all the resources available in their communities to create an attractive climate for the retention and attraction of business and industry.

By cooperating with two-year colleges, development groups draw on, yet strengthen, an important source of support. At the same time, they increase their own capacity to encourage business to remain, expand, or relocate in their areas. Joint efforts boost the overall economic health of their regions.

Business and industry comprise another side of the development triangle. Businesses work individually and collectively with economic development groups. They collaborate on their own with two-year colleges, contributing information about local markets, labor pools, and the kinds of services they need. They also may donate funds, equipment, and personnel to the overall effort. Business and industry have an interest in both the economic stability and growth of their community. They need a strong two-year college system to train personnel and offer more direct assistance.

Two-year colleges comprise the third side of the triangle. As a major component of the country's resource institutions, community colleges have a stake in the economic vitality of the regions they serve. These colleges furnish training and other services to business and industry, and provide assistance and information to economic development groups. In return, they garner a stronger tax base to support their operations, more students and clients, a market for their students and services, and increased general support in the community.

Evolution of Community Colleges

Two-year colleges are an integral part of the nation's educational system. They began as stepping stones to four-year institutions. However, the role of two-year colleges has evolved in the face of expanding and changing student enrollments and demands.

In 1960, fewer than 700,000 students were enrolled in about 600 community, technical, and junior colleges in the United States. Today, more than 5 million students attend more than 1,200 two-year institutions.[1] These colleges have developed more diversified programs to serve the increased number of students, particularly adult learners and part-time and full-time students who want occupational training but not necessarily a degree from a four-year institution.

External economic forces have brought changes as sweeping as those wrought by enrollment increases. Together they have resulted in demands from local communities for an expanded range of services. The shift from primarily a manufacturing economy toward an information and service-based economy, the spread of technology, and foreign competition have made today's students and colleges more aware than they were a decade ago of the need for occupational as well as academic education. As a result, two-year colleges now offer a much wider array of vocational and educational services to students and the surrounding communities.

Two-year colleges now find they have an opportunity to assist the business community. Their traditional role as providers of training has expanded to include a wide range of services from helping with contract applications to expediting foreign trade opportunities. Colleges' participation in the economic development process may become even more important in the future, due to changing demographics. The New England Board of Higher Education estimates that community college enrollment will decline 19 percent between 1985 and 1995, with a 35 percent decline in the Northeastern states.[2] Community colleges may have to diversify resources now devoted to standard courses to other development activities, such as technical and management assistance to companies, specialized training, small business incubators, and similar ventures.

Increasingly, two-year colleges recognize that they can serve an important function in cooperation with the business community as well as public and private economic development groups. Most of the colleges have experience providing services to business and industry. Nearly three-fourths offer employee training programs for private-sector enterprises; 83 percent report some involvement with state and local community development offices and various economic growth alliances.[3] Many instances exist of one-to-one ventures between two-year colleges and businesses. These projects are often substantial and offer significant contributions to economic growth.

An important payoff may result for the community, the colleges, business, and economic development groups from a comprehensive joint economic development strategy. Such a strategy aims at attracting new businesses or retaining and expanding existing ones to provide jobs and economic benefits to their areas.

Economic Development Capabilities

Despite a growing record, however, two-year colleges are not perceived as development partners by some business executives and local, state, and federal policy makers. Many factors account for this lack of visibility. Four-year institutions have a long history of assistance to the private sector through extension services, industrial parks, research laboratories, and consulting services. The size and prestige of many four-year institutions also gives them an edge in this arena.

Where their economic development capabilities are recognized, two-year colleges usually are perceived as providers of training. Most do offer an array of occupationally specific training programs that culminate in the award of an Associate of Arts degree. However, two-year colleges are more than education and training mills. They deliver many of the same economic development-oriented sevices as four-year institutions.

Many state and local economic development groups and business associations have tapped the colleges' capacity to provide other kinds of services--foreign trade assistance, economic surveys, data base maintenance, and support services such as use of facilities, equipment, consulting, and data management systems. Moreover, they have found that community colleges possess some advantages that four-year institutions do not.

First, nearly every community in the United States is served by a nearby two-year, junior, or technical college. Illinois, Iowa, Wisconsin, and North and South Carolina have found that the practical orientation of two-year colleges offers a way to focus economic development efforts at the local level, across the state.

Second, two-year colleges tend to be more flexible than their four-year counterparts. They operate on shorter time frames for curriculum and service development and are more adept at shifting resources to meet the emerging needs of their communities. Their faculty and governance structures usually are less rigid than those of four-year institutions,[4] which encourages greater use of practitioners as instructors and community situations as laboratories and case studies.

Finally, two-year colleges can assemble a critical mass of resources that is often the largest in any given community. Faculty and staff, who are accustomed to working with the local community, can offer expertise in the whole range of areas required to put together an effective economic development campaign. These colleges maintain equipment and facilities to promote economic growth and increased productivity. These resources, including libraries and data processing equipment useful to businesses of all kinds and sizes, can support training and other business development activities.

The Northeast-Midwest region can benefit from the many types of services that two-year colleges can offer. The region has been seriously affected by economic changes that include the decline of traditional manufacturing industries, structural unemployment, and the migration of industry and jobs to the South and West. The region lost about 218,000 manufacturing jobs between 1984 and 1985, nearly 70 percent of the total national loss of 313,000.[5] Continued regional vitality requires the best use of all existing resources. Turning

two-year colleges to the economic development task is part of a regional growth strategy.

The following chapters describe the major types of business aid, including strategic planning, one-stop assistance, technology transfer, and training. Each offers illustrative cases and makes recommendations for increasing two-year colleges' roles in economic development. Examples from across the country and from various types of schools will illustrate the importance of their participation.

2. Community College Role in the Process

Economic development efforts should encompass all who can contribute or who will benefit from attracting or retaining business and industry, including banks, civic organizations, state and municipal governments, business groups, labor unions, and educational institutions.

As indicated earlier, economic development is the systematic promotion of economic growth through increased business and employment activity of all kinds. Successful development requires strategic planning, which is undertaken by public or private agencies and organizations that strive to improve local, regional, or state economies. **Community colleges should be called upon early in the strategic planning process and made active partners.**[6] They can offer planning expertise to the process, and inform the private developers and local agencies what services they can provide to help businesses start and grow.[7] **All parties should work together to sort out the contributions each can make and to mobilize those resources at the point where they can exert maximum impact.**

In many instances--North Carolina and the Quad Cities area in Iowa, for example--college representatives sit on the economic development boards; in North Carolina, economic development officials sit on the community college board. Arrangements vary among programs; some have written contracts, and others have verbal agreements. In Illinois, the Carolinas, Wisconsin, and Iowa, the two-year colleges' role is spelled out in legislation.

For example, **St. Louis Community College** in Missouri was part of an economic development effort to remodel and revitalize an aging Ford Motor Company plant. The college provided training and worked with Ford and United Auto Workers representatives to develop training modules and to monitor the training. A coordinator from the campus worked closely with instructors and union representatives to refine the various training components to ensure specific needs were met and the variety of learning levels was accommodated. Ford, the state Department of Elementary and Secondary Education, and the Governor's Office of Manpower Planning provided $583,000 for the 11-month project--including JTPA funds. Also providing support and coordination for the effort were the St. Louis Regional Commerce and Growth Association, and the Private Industry Council of St. Louis/St. Louis County.[8]

Such broad-based collaboration ensures not only the mobilization of resources but the active support of groups essential to the success of the process. The St. Louis program supported the training of 270 skilled workers and supervisors in the new technologies needed to revitalize the auto plant. More importantly, the St. Louis area retained a major employer and economic contributor.[9]

Developing the Plan

An important aspect of economic development is gathering the information needed to draft and implement a plan. In small communities and rural areas

particularly, the colleges may be the only institutions with the necessary staff and expertise to conduct surveys of markets, employment pools, and other local economic conditions. Such surveys are essential grist for the economic development mill. **Economic development groups should use the survey expertise and background data resources of two-year colleges to gather the economic information necessary for successful planning.**

Daytona Beach, Florida, Community College conducts ongoing surveys of economic conditions in Volusia and Flagler counties and maintains a data base from which local economic development efforts can draw. Evelyn Fine, director of the college's **Mid-Florida Research and Business Center**, says information is gathered regularly about taxes, new business starts, growth trends, labor market conditions, and available training. Such data are made available to public-sector development offices and businesses through publications. Studies include a comparison of the business climates in 16 Florida counties, a survey of employers of their short- and long-range hiring needs for the Volusia Council for Employment and Economic Development, and an ongoing tourism study for the local Tourism Advertising Tax Authority.[10]

Fine says the center answers around 750 requests a year for demographic and economic information. Referrals come from the Volusia County Business Development Center, six local chambers of commerce, business owners and managers, state officials, bankers, accountants, and lawyers.

Once the necessary data is gathered, the economic development team can put together a strategic plan. Many two-year colleges have planning experts on their staff and faculty with experience in grantsmanship and contract negotiation. **Development groups should draw on the expertise of two-year colleges in drafting economic development plans.** In Wisconsin, the **North Central Vocational Technical/Education District** in Wausau works with local government agencies and chambers of commerce to identify economic development priorities and to help establish committees to carry out the organizations' goals. **The Southwest Wisconsin VTAE District** in Fennimore participates in meetings of the Southwest Wisconsin Economic Development Group, which analyzes the economic climate and seeks to avoid duplication of effort. Other participants in these meetings include the Southwest Wisconsin Regional Planning Commission, the private industry council, a Wisconsin utility company, and representatives of the University of Wisconsin campus at Platteville and the University's extension division.[11]

Marketing and Implementing the Plan

Once an economic development plan is drafted, it must be "sold" to various constituencies and implemented. Again, community colleges, which must market their own programs, can help economic development groups carry out marketing campaigns. They may include television and radio spots, newspaper advertisements and articles, brochures, fact sheets, and other materials. The **Mercer County Community College** in New Jersey develops marketing packages and publishes a quarterly newsletter to assist the marketing efforts of local development officials.[12] The college's efforts also include printing mailing labels, hosting breakfasts and seminars for business people, and hosting conferences. The **San Diego Community College District** has developed an elaborate brochure of the economic resources in the San Diego area that would be attractive to relocating businesses and industries. **Economic development**

groups should make use of the marketing expertise and facilities of two-year colleges, including printing and video resources.

In addition to the use of print and broadcast media, economic development depends on personal contacts. **Development groups should include two-year college representatives on the teams that talk to business owners and investors about the advantages and resources of state and local areas.** The college representatives can provide business executives with clear and accurate information about the services the colleges can provide and personify their commitment.

Recognizing this, **Illinois community colleges** are increasingly involved in helping companies locate, remain, or expand in their district. The colleges cooperate regularly with local chambers of commerce, economic development commissions, local governments and the Illinois Department of Commerce and Industry to attract new companies and key existing ones.[13] Statewide programs in Iowa and North Carolina also have two-year college representatives on their business attraction and retention teams. The representatives join economic development officials, local businessmen, officers of financial institutions and others in making on-site presentations to explain the advantages of expansion or relocation in those states.

In **Monmouth County, New Jersey** and **South Carolina**, two-year colleges are on the regular tour for business executives exploring the possibilities of establishing new operations or relocating existing ones. During such visits, the executives can examine the colleges' facilities and resources, meet with faculty and other service providers to discuss ways to meet training and other needs, and learn about the local business climate and resources. **High-ranking college representatives should be included on economic development recruitment teams, and the colleges should be regular stops for visiting business executives.**

Development groups--particularly non-governmental organizations--should explore with colleges the possibility of locating offices on the campuses, where appropriate. The colleges offer some very practical, day-to-day resources. **The Economic Development Group for Volusia/Flagler Counties,** Florida, has an office at the **Daytona Beach Community College's Research and Business Center.**[14] The location provides the group officials with easy access to college representatives, the ability to monitor programs, an opportunity to use the center's computer system and library, and instant access to economic data.

Finally, local development efforts can tap into college expertise in grant and contract procurement. In addition to state and local appropriations and leveraged funds from the private sector, economic development programs are funded via grants and contracts from government and from private foundations. **Economic development groups should draw on the funding expertise of two-year colleges,** which have experience in obtaining funds for their own educational programs. The two-year colleges participating in the statewide economic development efforts of the Illinois Community College Board provide assistance in grant and contract procurement. Such assistance may include everything from the identification of funding agencies and organizations to developing proposals and putting together grant applications.[15]

Clearly, two-year colleges can make important contributions to the crafting and implementation of economic development plans. In calling upon the

colleges for assistance, however, **the partners in the economic development triangle need to keep in mind that the colleges' primary role is education.** The colleges need to balance social, personal, and general education programs along with technical development activities. Their primary purpose remains the education of students to be both employable and well-rounded, not narrowly trained in one skill. This applies to courses offered to local business-persons, customized training programs, and projects that teach businesses how to apply new technology.

Understanding the logistics, advantages, and disadvantages of two-year college collaborations gives planning officials a foundation for applying these resources to the economic development process in the most effective way. Well-informed officials are also better equipped to advise those involved in development-assistance programs on how to take best advantage of local business opportunities and labor markets. As a result, trainees have a better chance at employment and businesses have more hope of success. Colleges' involvement in economic development throughout the process helps build a climate of trust between them and the other partners, and, over time, should contribute to the economic strength of the region.

Recommendations

Community college administrators should:

- o make sure their institutions are included in the strategic planning process for development;
- o identify staff, courses, facilities, and equipment that are especially suited for development efforts;
- o work with development officials to attract new business and retain existing ones;
- o develop business attraction and retention tools, such as brochures for local governments--a service of particularly great value in small cities and rural communities;
- o offer office space to economic development groups to put them closer to campus resources, data-bases, and library services; and
- o share their fundraising knowledge with nonprofit independent organizations and related groups.

Development agency and group leaders should:

- o invite the participation of community colleges in the strategic planning process;
- o identify the activities that community colleges are best suited to undertake, including surveying, marketing, and data gathering;
- o include two-year college representatives on business attraction and retention teams;
- o locate offices at community colleges to gain more direct access to faculty expertise and computer services; and
- o seek community college fundraising expertise to channel into the needs of private development groups and community-based organizations.

Business leaders should:

- o publicize through chambers of commerce the capacity of two-year colleges to provide information necessary for business development and marketing plans.

3. One-Stop Assistance

Two-year colleges are becoming "convenience stores" for business assistance. They can provide, in one location, many varieties of services that all types of businesses, but particularly small and medium-sized ones, need to flourish. In addition to employee training and technology analysis and integration, these firms need help with management, planning, data-processing, marketing, contract procurement, and other activities. Many of the same capabilities colleges offer the economic development process are applicable to the specific needs of businesses themselves. In this regard, the development triangle can become a tightly knit cooperative arrangement.

As noted, two-year colleges can mobilize a critical mass of resources to further a development strategy focusing on local problems and accessible to local clients. Through curriculum offerings and administrative practices, colleges routinely engage in many of the same kinds of activities as those needed to spur investment in development projects and encourage successful business practices. Thus, the colleges have developed the faculty and staff expertise to help businesses with many of their problems. And because of their local orientation, the two-year colleges often are more accessible and less intimidating to small business people than four-year institutions. Large universities may be more remote or aloof psychologically and seem more overwhelming because of their size and complexity.

Entrepreneurship and Technical Training

Programs of entrepreneurship training for budding business owners and technical training for more experienced company managers now are vital community college offerings. Businesses often fail because of poor management, and such training can help the managers and owners solve problems before they lead to failure. Courses and training modules run the gamut from beginning a business through management skills, computer applications, and financing.

At the direction of the **Illinois Community College Board**, the state's community colleges have become providers of entrepreneurship training and many other kinds of business services. Community colleges there are experienced in working with public and private sectors, and can serve as neutral coordinating entities to bring all parties in the economic development process together.[16]

Illinois colleges offer workshops and seminars on a variety of topics of interest to nascent entrepreneurs, such as starting and operating a small business, business applications of computers, fundamental accounting practices, and government financing programs. The workshops and seminars frequently are cosponsored with the U.S. Small Business Administration (SBA), the state Department of Commerce and Community Affairs, or local chambers of commerce. The colleges also provide technical instruction to thousands of business founders and operators through regular course offerings in business administration, business law, business financing, accounting, and personnel administration. These courses often are available during evening hours, a boon to small business operators unable to attend daytime courses.

These courses are offered at both urban and rural campuses. Because the state's business training program is run primarily through local colleges, it can be shaped to meet any special needs of businesses in rural, urban, or suburban areas. During fiscal 1985, Illinois' 38 community college districts offered workshops and seminars attended by 19,034 small business owners and operators.

Stark Technical College in Canton, Ohio, has created the "Thursday College for the Small Business Owners." The college offers several courses weekly, most of which are taught by small business owners. They include "How to Start and Manage a Successful Small Business" and "What Managers Do." Specialized courses are also offered in restaurant management and getting results from a tiny advertising budget. "Like many community colleges, Stark uses experts and resource materials from the nearby SBA field office and the local chamber of commerce," says a report in Nation's Business.[17]

State and local agencies and economic development groups should support entrepreneurship and technical training at two-year colleges tailored to local needs, and steer business operators to such courses.

Business Assistance Centers

The cornerstone of the Illinois colleges' economic development program is a network of **business assistance centers** in all 38 community college districts. These centers are like department stores. They provide industrial attraction, retention, and expansion services to economic development groups; customized job training for area business and industry; entrepreneurship training; contract procurement assistance; small business incubators; and employment, training, and job-search services for unemployed and underemployed workers. The centers' contributions to all businesses are credited with creating 6,240 jobs and retaining another 3,560 in fiscal 1985, due largely to the colleges' industrial attraction activities, customized job training, and individual counseling and management advice to small businesses.[18]

Experts from the colleges help businesses in a variety of situations. For example, an accountant will help the business set up its books, or a computer expert will give advice and information on how to automate bookkeeping, accounting, and inventories. Such assistance could range from how to conduct an advertising campaign to how to lay out a business facility.

In fiscal 1985, Illinois provided $2.7 million for the operation of the centers and planned to provide another $4 million in fiscal 1986. The colleges generated another $17 million from a variety of sources--the Job Training Partnership Act, revenues for training and services, the college's own operating funds, private-sector and local government donations, federal small business development center funds, and foundation grants.

The Illinois model is an outstanding example of the advantages of clustering a variety of economic development resources and services in one organization. Businesses do not have to shop around to find employee training one place, management assistance in another, and technological assistance in still another. In addition, economic development groups can point to one source of assistance, delivered locally, when seeking to attract new industries or per-

suading existing ones to remain in the area and expand. **Economic development agencies should identify likely components of a one-stop approach and evaluate its potential advantages to the business community.**

Another example of comprehensive business assistance and services is the **Daytona Beach Community College**, which has established two **Centers for Small Business** in collaboration with the Volusia County Private Industry Council.[19] The college also advises businesses seeking foreign trade opportunities, conducts economic surveys, maintains a data base on the local economy, and provides customized training.

State and local governments should authorize and fund business development centers at two-year colleges where businesses of all sizes, but particularly smaller ones, can receive a variety of services at one location.

Small Business Centers

The Illinois and Daytona business centers were created to serve all applicants whatever their size. However, community colleges' most important contribution to economic development may be the help offered to small businesses. Recent studies show that most new jobs and innovations come from businesses with eight or fewer employees. Few can afford expensive training and consulting. In league with their triangle partners, two-year colleges are filling the gap between small business needs and required resources by providing flexible, accessible, and locally available assistance.

Some states locate small business development centers (SBDCs) at two-year colleges. SBDCs receive financial and technical support from the Small Business Administration. This agency supports business advisory services through a cooperative agreement between the federal government and a statewide network set up within a university system. Two-year colleges have participated in the SBDC program as subcontractors to four-year institutions; some have established similar small business centers on their own. SBA provides half the funding for each center, and the other half is arranged by a lead agency--a government unit, university, or private organization. Two-year college systems or networks can muster the same level and magnitude of resources as four-year institutions. But so far only two colleges systems, in Oregon and Alaska, have been designated as lead institutions in the SBDC program.[20]

Two-year colleges should be considered as lead organizations in the SBDC program on an equal basis with other types of organizations.

According to Rose Ninni, dean of continuing education, the **Mercer County Community College SBDC** offers low-cost workshops and many other services gratis to small businesses.[21] The center offers management assistance to companies in all industries, including high-tech, manufacturing, retail, service, and wholesale. Its small business consultants use the latest techniques of management analysis to help business operators identify options and strategies and select the best alternatives, Ninni says.

The consultants range from accountants to zoning specialists. The college draws on more than 75 professionals from the local community who have volunteered to serve as small business advisors. Consultation is available in a wide variety of areas, including accounting, advertising, computerized

services, financial planning, licenses, graphics and printing, and stress management. In addition, the center offers training in business planning, financial management, real estate, tax analysis for small business, among other options.

Oregon's **Lane Community College** was the first two-year institution to operate an SBA-supported SBDC. "The college combined existing programs and resources and devised new ones to offer a wide range of management services," according to James McKenney of the American Association of Community and Junior Colleges (AACJC).[22] Offerings include long-term educational programs, short-term workshops and seminars, business consulting, and supporting physical resources. In some cases it acted as liaison with economic development organizations offering other programs and services.

During its first year of operation, 1983, Lane's SBDC served hundreds of businesses, which reported increased sales, higher employment, and increased ability to obtain financing. The Oregon legislature has provided $530,000 to expand the SBDC concept to other state two-year colleges. **Community colleges and economic development groups should explore the establishment of SBDC centers on campus.**

Other Small Business Help

With or without SBA support, many states and local communities are conducting small business assistance programs through the community colleges. Small business is particularly important in rural areas that lack large employers and access to sufficient amounts of either public or private investment capital. In such areas, the two-year college may be the only institution that can package the resources required for business development. **State and local policy makers should identify ways in which the needs of rural communities can be served through two-year colleges.**

Niagara County Community College in New York is active in promoting development in its rural service area through industrial training and assistance to small business. The college funnels its support through a **Technical Assistance Center** (TAC) funded by special state appropriations.[23] The center provides management advice, a small business incubator, small business "survival training," revolving loan fund management, and help in implementing regional economic development plans.

The center's management assistance counselors help its clients gather, present, and organize financial reports and loan packages. TAC can produce studies and evaluations of new business proposals and expansion plans, start-up cash requirements, marketing strategies, calculation of break-even points, and cash-flow analyses. The small business incubator is designed to nourish small businesses until they can get on their own feet. Incubators provide businesses with facilities, telephone and secretarial services, access to computers, and other help. Tenants at the TAC are considered students and use college facilities and staff at cost to improve their chances of survival. **State and local agencies and private economic development groups should establish small business incubators linked to two-year colleges.**

TAC survival training counsels about 200 potential entrepreneurs annually. Depending on program design, JTPA funds can be used to finance this kind of

training. Many dislocated workers have skills that could be used for self-employment; TAC has developed a 120-hour course to help dislocated workers build the managerial skills necessary to run their own businesses. **State and local governments and economic development agencies should promote managerial and survival training. Community colleges should set up or expand appropriate training courses, seeking state and federal support.**

In its revolving loan fund management effort, TAC contracts with individual economic development agencies. Businesses can borrow money from the fund if they are judged eligible but are unable to obtain conventional loans from ordinary lenders. Repayments are channeled back into the fund for loans to other businesses. The TAC currently manages $1.2 million in revolving loan monies for an eight-county region. Revolving funds can play a crucial role in rural areas, where often they are the only financial resource for small business development other than branch banks. The funds are flexible in use, can be targeted to diverse or specific industries, and capitalized from a variety of public and private sources.

State and local governments, economic development groups, and private financial organizations should explore establishment of revolving loan funds in collaboration with two-year colleges to help small and medium-sized businesses, especially in rural areas, get started or expand operations.

Kirtland Community College in Roscommon, Michigan, also has taken a comprehensive approach to economic development in its rural service area, which covers more than 2,300 square miles.[24] Kirtland's **Business Development Center** provides local development groups with help to develop business leads, promote development opportunities, conduct trade shows, and maintain local business and industrial files. The center's functions include microcomputer networking, access to local and regional economic data systems, and help in tapping state and national data systems.

Foreign Trade and Contract Help

Small and medium-sized businesses often are not regarded as candidates for competition in the international trade arena. Yet their sales of goods and services to foreign customers strengthen local economies and affect the nation's overall balance of trade. Community colleges can become involved in activities that help businesses enter the international marketplace.

Mercer County Community College in New Jersey helps businesses develop foreign trade contacts and assess opportunities in foreign markets. The college supplies much of the information and training that businesses need to compete effectively. For example, the college recently offered an "international business over breakfast" workshop. Experts from business and government explored the mechanisms and stumbling blocks of dealing with foreign government import and export regulations and procedures. Participants were led step-by-step through a process that helped one company succeed in the international marketplace. It dealt with research, capital, regulations, and sales techniques. Agents in international trade addressed other topics, such as cultural factors that affect trade and basic exporting techniques.

The college also offers workshops on the fundamentals of exporting, international transportation, freight forwarding, letters of credit, and tax bene-

fits of exporting. The college sponsored a China Roundtable for businesses and hosts monthly international business luncheon workshops.[25] **Community colleges, in conjunction with state, local, and federal economic development policy makers, should create practical programs that help businesses expand their foreign trade potential. Business executives with foreign trade experience should be urged to work with the colleges as expert consultants or adjunct faculty members to help emerging exporters overcome foreign trade hurdles.**

Contract procurement is another area in which small businesses face a disadvantage in the marketplace; they cannot afford to maintain full-time procurement staffs needed to obtain contracts from the federal and state governments or larger firms. Community colleges have developed expertise in procuring funds from such sources. Some colleges offer this expertise to small businesses.

In Illinois, the **Department of Commerce and Community Affairs** cooperates with the **Illinois Procurement Outreach Program** to enlist community colleges statewide in procurement assistance to business.[26] Currently, 22 community college districts are involved with area business and industry seeking state and federal contracts. Some colleges have incorporated contract procurement assistance into other services. In fiscal 1985, these colleges served 2,255 firms through workshops, bidder list applications, bid preparations, and counseling. These services helped obtain nearly $6.3 million in contracts for Illinois businesses. The effort resulted in the start-up or expansion of 14 companies and the retention of six, creating 15 jobs and retaining 511. **Community colleges should establish procurement outreach programs to serve local small business interests.**

Recommendations

Development agency and group leaders should:

- o establish, and be prepared to serve, as liaison between businesses needing assistance and community colleges that can provide it;
- o cosponsor workshops and seminars with community colleges and other agencies;
- o authorize and fund business development centers at two-year colleges;
- o consider establishing a revolving loan fund in conjunction with community college technical assistance efforts;
- o explore the feasibility of establishing SBDC-type centers on community college campuses; and
- o use community colleges to provide various types of development assistance in rural areas.

Community college administrators should:

- o provide economic development officials with detailed information on course offerings applicable to business needs;
- o conduct briefings and tours of facilities for business owners, managers, and development agency officials;
- o create procurement outreach programs for local business operators;
- o work with economic development agencies and groups to identify business needs most prevalent in their communities;
- o offer space to house technical assistance centers;
- o promote internships, faculty "loans", and course flexibility to meet business needs, which may be linked to business incubators that could be located on campus; and
- o explore the types of export counseling assistance that they can offer to small businesses.

Business leaders should:

- o direct local associations and chambers of commerce to publicize available services;
- o provide input into type and quality of services offered at college business assistance centers; and
- o work with community colleges to tailor international trade counseling and seminars to local business types and needs.

4. From Laboratory to Workplace

New technologies are permeating every aspect of business and industry. Their use creates new business development and prospective new jobs. Technology transfer--the application of new technologies to industry operations and processes--provides extraordinary opportunities for the partners in the development triangle.

However, all the partners should be aware of the realities of "high technology" in the economy. High-technology industries currently represent only 3 to 13 percent of total U.S. employment.[27] While high technology is the fastest-growing segment of the economy, it will not provide the greatest number of jobs through the end of the century.[28] A recent report by the Office of Technology Assessment on the role of technology in regional development states that,

> While the conditions that led to concentrations of microelectronics firms in Silicon Valley and Route 128 are unlikely to be replicated in other areas, new opportunities are being created elsewhere by advances in microelectronics and other technologies and in the application of new products and processes to existing industries.[29]

Two-year colleges can help business and industry incorporate these technologies into their operations through training, applied research, education, and demonstrations. By establishing and nourishing the technological capabilities of two-year colleges, policy makers add an important incentive to companies to remain or relocate in their areas of responsibility. **Community colleges, in conjunction with development groups, should define the role they can play in introducing new technologies to existing industry.** In this regard, economic development agencies can help the colleges acquire the funds and state-of-the-art equipment and guide industry to their high-technology programs. In addition to using the services offered by the colleges, businesses can donate equipment and work with the colleges to create the programs that industry needs.

One of the nation's largest corporations, General Motors, has recognized that two-year colleges have the experience to help the company adapt technology to manufacturing processes. GM has called on two-year colleges to provide technological training for its workers in Michigan, in Delaware, and at its new Saturn plant in Tennessee.[30]

Ohio's Advanced Technology Centers

Ohio has gone to great lengths to equip its two-year college system with technology-transfer mechanisms. The state has created and funded high-technology centers at the colleges to introduce Ohio industry to the most up-to-date technological processes, and to help make companies more efficient, cost-effective, and competitive. The state's program addresses such problems as

obsolescent manufacturing plants, a decrease in manufacturing jobs, and the migration of jobs and industries to other states.

To further the technological development of its industry, the state has established advanced technology centers, hired technology transfer agents, and organized a network of vocational/technological resource consortia that include two-year colleges. Advanced Technology Centers have been established at **Lorain County Community College** (LCCC) in Elyria and **Cuyahoga County Community College** in Cleveland.[31] The state created the centers to promote technological advancement by encouraging industrial applications of the latest technical research and innovation. The legislature voted $5.4 million to construct the first center, which also provides technology transfer, print and nonprint information libraries, and an industrial data base. Different sections house robotics, a computer-integrated manufacturing laboratory, microelectronics, and computer-aided design and manufacturing (CAD/CAM).

Regional industries have responded well to the new center. Manufacturers have been eager to loan and donate equipment to the center because it helps market their products. For example, LCCC students and industrial trainees can learn to use the latest robots for assembly, machine-to-loading, and welding. Students and faculty benefit from opportunities to use the equipment for "real life" applications. This hands-on experience makes them better manufacturing workers or advisors.

An example of LCCC's cooperation with industry is a technology-sharing relationship it has developed with Cincinnati Milicron. Recognizing the advantages of an affiliation, the large machine-tool producer has donated more than $1 million in robotic equipment to the center. Cincinnati Milicron uses LCCC facilities to demonstrate equipment to customers, and to train company sales and service representatives and purchasers of its products. The collaboration is an excellent example of the way industry can help establish and support such centers while benefiting from the services the college can offer in return.[32]

Economic development officials should outline mutual advantages to encourage industry to make contributions of equipment to two-year colleges for training and demonstrations of new technologies. Business executives should explore with the colleges the best ways such partnerships can be carried out.

Cuyahoga County Community College's (CCCC) Unified Technology Center is a second effort by the state to bring the advantages of high technology to industry. The legislature provided $8.5 million to the college in 1983 in line with the state's strategic plan for economic development. A steering committee of senior executives from area firms guides the center's programs and products. The center provides business with the most sophisticated and cost-effective mechanism for advanced multi-technologies training. The center features a telecommunications center with satellite linkage, a media resources library and learning center, and laboratories designed for fields ranging from manufacturing to laser electro-optics.[33]

In cooperation with the Cleveland Advanced Manufacturing Program, a coalition of six Advanced Technology Application Centers throughout the state, CCCC focuses on three major activities:

- conducting annual manufacturing surveys of target businesses to measure the impact of high technology on businesses and help determine the need for employee retraining;

- designing an efficient model for competency-based customized training in advanced manufacturing technologies; and

- acquiring and producing customized education and training packages in specific advanced technology fields.

State policy makers should identify two-year colleges with the capability to develop high-technology centers and provide the necessary funding and support to establish such centers. Of course, not every community college can or should be developed into an advanced technology center. **States should locate such centers in areas with industries that can take advantage of their services.**

An Advanced Technology Training Consortium

CCCC also participates in the Mid-America Training Group, which is establishing high-technology centers at ten community college campuses in the Midwest. The colleges, in addition to CCCC, are LCCC; Kellogg Community College, Battle Creek, Michigan; Macomb Community College, Warren, Michigan; Rock Valley Community College, Rockford, Illinois; Sinclair Community College, Dayton, Ohio; Triton Community College, River Grove, Illinois; Des Moines Area Community College, Ankeny, Iowa; Eastern Iowa Community College, Davenport; Iowa; and North Central Technical Institute, Wausau, Wisconsin.

Triton Community College provides an example of the services supplied by members of the consortium. The college sends its faculty to the nearby Japanese-owned Matsushita Industrial Corporation to teach courses in electronic shop techniques, quality-control fundamentals, and robotics. Matsushita components for its television, microwave oven, and video cassette recorder products are used in the courses.

Kellogg Community College helped C.A. Picard, a metal fabricating company, retrain workers so the company could introduce a new welding process into its operation.[34] **Economic development officials should, where conditions permit, establish interactive and regional consortia to provide for technology transfer to business and industry.**

Technology Transfer Agents

Ohio's development agencies recently added another tool to the state's economic development inventory. The **Ohio Technology Transfer Organization** (OTTO) operates through 24 community colleges in cooperation with **Ohio State University.** The network provides technical assistance, technology information, and training to Ohio businesses by connecting research to the marketplace. The network transmits new techniques from laboratories and classrooms to businesses that can put the results to practical use.[35]

Community colleges deliver the services through full-time technology transfer agents on each campus. The agents link businesses with technology

experts at the local college, or, if necessary, with Ohio State. The network serves mostly small businesses. For example, if a small business wanted to automate its office, the transfer agent would put it in touch with experts in that field. The system provides the businesses with technical expertise they otherwise could not afford. **State and local governments should assess the feasibility of establishing technology transfer agents at local community colleges.**

OTTO is funded as a $1 million line item in the state budget. It also receives funds from business and industry, local foundations, and state and federal programs, as well as services contributed locally. The funding illustrates how economic development groups and two-year colleges can draw on a variety of resources to mount creative programs. **State and local economic development groups, the colleges, and other partners should examine all potential funding sources to put together packages for technology transfer and related economic development programs.** Such efforts can go a long way towards enhancing the climate needed for small business development and growth.

Ohio's Vocational/Technical Consortia

Ohio's third program shows how other educational institutions can be drawn into partnership with two-year colleges to foster economic development through technology transfer. The state gives the start-up training industries need through 23 vocational/technical resource consortia of secondary schools, two-year colleges, vocational/technical centers, and university branches. This program, linked to OTTO, is coordinated at the state level but provides direct services locally via the two-year colleges and other educational institutions.[36] The program shows that schools and colleges can cooperate among themselves, as well as with economic development agencies and businesses, to further an area's overall economic potential. **States and communities should explore and devise ways that educational institutions at all levels and of all kinds can cooperate to promote economic development.**

An Industrial Park in Wisconsin

Two-year colleges also can play a role in industrial development through the creation of advanced technology industrial parks. Such facilities usually are associated with research universities. States have long recognized the value of such efforts to their industrial and economic development strategies. Industrial parks of this type offer extraordinary opportunities for economic development by clustering resources, including the technological expertise of educational systems.

Wisconsin's 16 **Vocational, Technical and Adult Education** (VTAE) districts and their associated technical institutes offer industry a wide array of services to improve productivity and quality in the workplace. The districts have developed an applied technology center, business incubators, a high-technology laboratory, multiple funding contracts, teleconferencing, computerized instruction, technical assistance, and participation in the recruiting of new industries.

A notable example is the **Fox Valley Technical-Research Incubator Park** (Tri-Park), developed at the campus of the **Fox Valley Technical Institute**

(FVTI). The 290-acre park, now under development, surrounds the institute's campus northeast of Appleton in Outagamie County. The corporation governing Tri-Park seeks to recruit high-growth industries compatible with the technological, educational, and business support services it offers.[37] The tenants are interested in product research and development operations, highly technical and service-oriented firms, and light industries that have an interest in expanding or developing new-technology businesses.

One of the facilities to be located in the park is FTVI's **D.J. Bordini Technical Innovation Center.** The 30,000-square-foot technology building will house a technical library, economic development center, large group conference area, product development service center, flexography laboratory, demonstration area, customized concepts laboratory, and numerous classrooms. The center, the park, and other facets of the development will aid industry through research, training, technology transfer, and other services.

Tri-Park is an outstanding example of two-year college cooperation with other groups, organizations, and agencies for economic development. An educational consortium composed of FTVI, the University of Wisconsin Center-Fox Valley, Lawrence University, the Institute of Paper Chemistry, area high school districts, and local agents for the Job Training Partnership Act helps future tenants-owners develop an educational and training plan for their firms and employees.

Funding also is cooperative. The total estimated cost of development is $1.65 million, with funds contributed by the federal Economic Development Administration, the state VTAE Board, FVTI, and private and business-sector donations. The park is being planned and developed by a nonprofit development corporation formed by the Fox Cities Chamber of Commerce and Industry, FVTI, and Outagamie County. Future tenants automatically will become members of the board and eventually take over full management of the park.

The Fox Valley effort shows that two-year colleges, as well as four-year institutions, have the ability to develop industrial parks. **State and local economic development groups should determine if community colleges in their areas have the capabilities to develop advanced technology industrial parks.** Two-year colleges may offer unique opportunities for industrial park development in small communities, rural areas, and other areas without four-year institutions.

Technology Transfer to Small Business

In a venture to assist small business, the North Central VTAE District is creating an **Applied Technology Center** at the **North Central Technical Institute** in Wausau, Wisconsin. The center will bring small businesses and industries together to buy special equipment too costly to purchase individually.[38] In this way, the institute acquires highly technical equipment and can transfer the technology to participating small businesses, which then can use it during off-hours. One part of the center's efforts is a laser technology program to transfer this technology to cooperating businesses. **Business and industry should explore cooperative purchase, lease, or loan arrangements with the colleges for equipment shared in technology transfer programs.**

Such partnerships can do more than secure equipment. Ronald Schubert, economic development coordinator at the institute, says the center will provide small businesses with consulting services, problem-solving expertise, new technological systems, and analyses of their needs for training.[39] "We're not dealing with bricks and mortar," he said. "We deal with concepts for reorganization, the allocation of resources to make the systems work." For example, the institute might help small companies develop the capability to use laser technology, which then could be applied to a product line in an emerging company housed in a small business incubator at the institute.

In short, more than high-technology leaders or the giant corporations can benefit from high technology. Small and medium-sized businesses can apply computer, teleconferencing, laser, and even robotics technology to their operations. Two-year colleges provide an ideal local setting for transferring such technology, showing small business how to adapt through training, demonstrations, and resources such as incubator facilities. **Policy makers should explore all types of programs to help small businesses to adapt high-technology breakthroughs and processes and findings. They should cooperate with two-year colleges possessing the capability and resources to mount such programs.**

Recommendations

Development agencies and group leaders should:

- o serve as liaisons or brokers on technology transfer networks between colleges and universities;
- o identify two-year colleges with the capability to develop high-technology centers;
- o provide seed money and other resources to technology transfer centers;
- o promote regional consortia to encourage technical transfer as an educational strategy; and
- o establish technical transfer agents at community colleges.

Community college administrators should:

- o define their most advantageous role in technical transfer;
- o provide training expertise in new technologies;
- o identify resources suitable for technology transfer programs;
- o explore suitable affiliations with vocational and technical schools and other educational institutions; and
- o encourage small business development through sponsorship of advanced technical industrial parks.

Business leaders should:

- o explore technical transfer links with community colleges;
- o donate or loan state-of-the-art equipment for technology transfer training and assistance centers; and
- o identify ways to use community college facilities for demonstration or training purposes.

5. Training: The Backbone of the Economy

State legislation spells out in general terms the role of two-year colleges in the overall economic development process. However, cooperation grows through informal interaction, and the partners learn to understand their respective roles through meetings, serving on each other's governing boards, and working together on specific projects.[40]

Collaboration between two-year colleges and economic development groups is most prominent in the area of occupational skills training. Several states have made two-year colleges central to their development efforts through the delivery of training services for relocating and expanding industries. These states have integrated the colleges into their long-range plans as full partners in the economic development triangle. Such states recognize the advantages that community colleges possess over four-year institutions. They can redirect their resources rapidly to meet the changing needs of industry, and deliver customized training on campus or at the work site.

Training is the most common type of business assistance these colleges supply. A 1985 survey of 770 two-year colleges by the American Association of Community and Junior Colleges found almost 75 percent provided some type of training for large businesses as well as for labor unions, small firms, and public-sector employers.[41] There are three basic types of training--general, customized, and entrepreneurial (discussed earlier under "One Stop Assistance"). Trainees may be employed by a company or be potential employees.

Collaborating on training is important for several reasons. Companies need competent, skilled workers to remain competitive. Without them, modern technology cannot be used effectively and production and profits fall. Technology changes rapidly, so businesses must update their techniques constantly. This translates into the need for continuing education and reeducation of present workers. If all members of the triangle work together, business can avoid duplicating what colleges are already able to deliver and take advantage of the resulting economies of scale.

Colleges benefit from this collaboration by ensuring that their training is applicable to "real world" working situations. An important consideration here is that training costs can be prohibitive. Companies rarely find it economically feasible to set up and operate their own training programs. Many two-year colleges already have trainers on staff and appropriate curricula in place. They can adapt readily to changing business needs. Employers can work with the colleges to develop high-quality, flexible training programs and lend their own experts to serve as part-time faculty where appropriate.

Community colleges offer workers a chance to update obsolete skills and learn new occupations as a way of guarding against dislocation and unemployment. In slow economic times, two-year college enrollments rise as people seek to master new skills and improve their employment prospects. Older workers, who have been out of school and in the work force for several years, often need retraining, particularly when long-held jobs disappear. Most businesses do not provide any reemployment assistance for workers who must be let go. By joining

forces with the two-year colleges, however, a company can begin to provide for the training its workers need for lifetime employment.

Statewide Industrial Training

The availability of training is one of the most important factors businesses weigh in their location decisions. States can help defray employers' costs for worker education through their community college systems. Programs can provide funds to recruit, screen, train, and pay part of the wages of the trainees. Businesses find such arrangements difficult to resist.[42] Economic development officials have found that low-cost training is one of the most compelling incentives to attract new businesses and retain existing firms and encourage them to expand.[43]

State legislators and executives should recognize the role of training in the economic development process and explore the part that two-year colleges can play. They should create and support a flexible training capacity where none exists. The payoff from two-year college training can be very high. Several states have incorporated their two-year college training capacity into their economic development strategies. Both **North Carolina and South Carolina** have established and maintained programs involving two-year colleges as a central element in their development efforts since the early 1960s.[44]

In North Carolina, 58 community colleges, technical colleges, and technical institutes provide state-sponsored customized industrial training services to all new and expanding businesses. The programs are tailored to meet the specific needs of each company. For example, Norton Simon, Inc., a Fortune 500 firm, established its Max Factor cosmetic manufacturing operation in the state. **Vance-Granville Community College** trained 280 Max Factor employees in skills ranging from chemical compounding to set-up mechanics--the art of modifying machinery to accommodate an ever-changing product line.[45]

Other training programs are tailored to meet the specific production needs of each company. Industries receive the services as long as they continue to create new jobs. Many of the nation's largest companies now have at least one manufacturing plant in North Carolina; two-year colleges and institutes have provided training for more than 400 companies over the last 15 years.[46]

The Industrial Services Division of the North Carolina Board of State Community Colleges administers the training programs and helps the Department of Commerce sell the state as a desirable industrial location. The division also helps the colleges design quality training programs and put them in operation. Seven full-time regional training specialists work on various projects.[47]

South Carolina delivers training through 16 special schools created by an act of the legislature. The program is called the **Technical Education System.** "The keystone of the program is a partnership for economic development between the statehouse, the courthouse, the schoolhouse, and industry," according to the Economic Development and the Community College,[48] a report of the National Postsecondary Alliance. Training is offered at no cost to employers. Since the program began, industries have invested $17.6 billion in South Carolina and created 330,000 new jobs. State officials give most of the credit for this

economic growth to the Technical Education System. According to the report, South Carolina economic development officials believe

> that for a community or state to attract new industry and business in the 1980s and thereafter, it will be necessary to ensure that their two-year colleges can provide a solid supply of trained technicians.[49]

In North Carolina, former Governor James B. Hunt, Jr. said that the two-year colleges are "the backbone of the economy and the single most important element in the state's program of economic development."[50] During the almost 25-year life of these programs, both states have taken long strides in moving from poor, agrarian economies to ones that provide a more affluent, balanced economic structure of industry, services, and agriculture.

State policy makers should conduct a comprehensive assessment of the training capacity in the variety of educational institutions around the state. Where gaps exist, the state should make increased investments so that training for new and expanding businesses can enhance economic growth potential.

Innovative Funding Approaches

The North and South Carolina programs are funded primarily from state appropriations. Iowa uses its two-year colleges in much the same way, but has developed a unique funding plan. The state provides no up-front grants or current resources for its two-year college economic development program. Rather, the financing is generated by the new jobs that are created.

The colleges issue "training certificates" for sale in financial markets, patterned after instruments used in more prevalent tax increment financing (TIF) mechanisms. Funds from the sales are used to set up training programs at the colleges and to reimburse new and expanding companies for costs incurred if they choose to conduct training inhouse.

Repayment of the certificates occurs in two ways through the businesses that benefit, but at no cost to them. First, 1.5 percent of the withholding tax from the trainee's wages goes to the company to pay the colleges for the training. The second source is an incremental property tax assignment paid directly to the college by the county treasurer after the new or expanding business pays its taxes. This earmarked revenue comes from the employer's existing tax liabilities; no additional taxes are paid by the firm that uses the training program.[51]

This funding mechanism gives the community colleges the ability to raise money, a large portion of which is used to reimburse employers for on-the-job training. It also obviates questions usually raised regarding publicly supported training--such as whether programs are serving people most in need of help or whether businesses would have provided the training anyway in the absence of public funds. To date, businesses and the colleges appear to have achieved a mutually satisfactory arrangement of interests.

In Massachusetts, two-year colleges participate in the **Bay State Skills Corporation** (BSSC), which also uses an innovative funding mechanism. The BSSC is a quasi-public corporation created in July 1981 to respond to the rapidly

changing nature of the state's economy. Its basic purpose is to award grants to educational institutions that link up with one or more private companies to train people for jobs in high-growth fields. Every dollar BSSC awards to a training institution must be matched with a dollar from the corporations participating in the training.

BSSC funds programs in a wide variety of occupational areas: machine operation; precision machining; nuclear medicine technology; respiratory therapy; word processing; data entry; microwave engineering; computer-aided drafting and design; electronics; and advanced automation and robotics. The training spans entry-level, retraining, and employee upgrade training, as well as advanced-level college and university education. These programs foster BSSC's goal of expanding the number of skilled workers available for Massachusetts companies. An outside evaluation of the funding method declared,

> BSSC's 50/50 matching program is an innovative and important model for achieving economic development and employment objectives . . . . Most employers judge the program a success thus far and would recommend it to others."[52]

Its funding model is efficient as well; most BSSC programs achieve a much higher match from industry than the 50 percent required.

The state of **California** devised an innovative method for financing training when it created the Employment Training Panel. Funds for the panel's programs are provided from a state payroll-based tax that was instituted in the wake of a reduction in the state's unemployment tax. Employers' tax liabilities stayed even in this tax tade-off arrangement, and the state gained a large fund for training. Since its inception, the Employment Training Panel has been involved in many cooperative ventures.

In a local cooperative effort, **Los Angeles Valley College, Los Angeles Southwest College,** and **East Los Angeles College** joined state and local groups to provide training to laid off aerospace workers and those likely to be displaced.[53] Partners in the effort were Lockheed California Company, the International Association of Machinists and Aerospace Workers, the Engineers and Scientists Guild, and the California Employment Training Panel.

The program consisted of two initiatives. The first trained 144 machinists and machine operators in computer numerical control. The effort was spread geographically over 50 miles of training sites and employers. To overcome this, a $200,000 computer numerical control lab was mounted in a tractor trailer so that training could be brought to the places where the need existed. The Employment Training Panel was so pleased with the operation that it supported an additional mobile lab and added another $711,360 to continue the program.[54]

The second initiative was a computer-assisted design program. In addition to $485,000 from the training panel, the colleges received $185,000 in software contributions from Lockheed. The industry and the unions helped develop Valley College's CAD curriculum, helped specify the equipment needed, recruited trainees, and supplied instructors who had the required credentials.[55] As a result of this program, a plant faced with the possibility of closing was able to retrain its work force and remain a viable and valuable contributor to the local economy.

This investment in employee retraining was a major effort involving industry employers, organized labor, the state of California, and the Los Angeles Community College District, according to James McKenney of the AACJC,

> The threat of imminent job loss, human resource loss, and tax revenue loss got everyone's attention. Equally important was the investment in the long-term future. The area economy just simply cannot keep up with the demand for highly skilled technicians. Therefore, not only is Lockheed anxious to retrain its present employees, but it is similarly interested in cultivating the vineyards of the future.[56]

State policy makers should explore innovative mechanisms to tap and package new sources of financing or training as an economic development activity. Local and state economic development groups should encourage cooperation among two-year colleges, industry, labor unions, and state and local agencies to mount training programs to retain local industries and the jobs they provide.

Job Training Partnership Act

The Job Training Partnership Act (JTPA) is an important source of federal funding for state and local training efforts, including those launched by two-year colleges. Generally, the colleges participate in JTPA as contractors to the local Private Industry Councils (PICs), JTPA's business-dominated planning bodies. Two-year colleges nationwide have been heavily involved in JTPA since its passage in 1982. Because the Act encourages occupational training with assured placement potential, community colleges are an obvious service provider. Their quick response capability is attractive to the PICs and to employers. At the same time they have much to offer to the disadvantaged clients targeted by JTPA.

The state of Tennessee took a unique approach in implementing the JTPA program. The state chose its existing community college districts as the basis for establishing the boundaries of JTPA service delivery areas (SDAs) in the rural parts of the state. According to David Bedford, the state's assistant commissioner of labor, the choice was fortunate in that the state was able to take advantage of the expertise of proven program administrators in the community college system.[57]

The arrangement also gave JTPA quick access to readily available training in the area vocational/technical schools, which are organized within the community college system. Tennessee also uses the community college system to administer the specially designated education funds (8 percent of a state's JTPA allocation) that provide basic skills training and GED preparation. By maintaining an identity for these funds apart from other state and federal money in the state Department of Education, the Labor Department has been able to boost their impact.

Many persons eligible for JTPA cannot read or lack good work skills; these deficiencies often place special demands on the community. Instead of contributing taxes, these people require tax-supported social and income maintenance services. Therefore, efforts to train them for the work force provide a double economic benefit: adding them to the tax rolls, and removing them from dependence on tax-supported services.

In March 1979, **Chemeketa Community College** in Woodburn, Oregon, and the **Mid-Willamette Jobs Council** in Salem joined forces to provide classroom and hands-on training in production skills for light industry and manufacturing, as well as literacy and work-skills training. In addition to JTPA funds for instructional costs, tuition, and tools, the program used in-kind contributions of materials and equipment from local industries.[58]

This open-entry, open-exit program trains people eligible for JTPA whose limited skills, lack of job experience, and personal histories have kept them from finding permanent, full-time employment. Some participants cannot read, write, or speak English. Some are preparing to reenter the community upon release from prison or the state mental hospital. They need not only job-specific training, but also have to learn good work habits, develop a sense of responsibility and a spirit of cooperation on the job, and improve their basic skills. Because the area lacks major industries, most graduates of the program must find jobs in small firms such as lumber yards, furniture companies, and mobile home manufacturers. By mounting a comprehensive program, the college and the jobs council enrolled 367 in the program, trained 226 of them, and placed 199.

The program provides for the recruitment, assessment, and selection of the people who will receive training. It includes skill development in which trainees must demonstrate ability to use the full range of tools, understand how they are used in different industries, and complete several building projects. In addition, the program emphasizes the development of interpersonal skills and good work habits such as self-motivation, responsibility, and communication skills. The program also addresses basic skills deficiencies. Trainees who want to earn a high school equivalency diploma or to work on basic mathematics and reading skills attend classes at the Woodburn Outreach Center, a branch campus of the college.

Industry is heavily involved in the project. Company representatives advise the program on job market conditions, placement opportunities, and the skills needed for entry-level jobs. Employers also have been active in informing other business leaders about the program. The industries provide constant feedback on the effectiveness of the training and the individual trainees' needs.

The Oregon partnership demonstrates how economic development efforts can mobilize two-year colleges to provide a wide spectrum of education and training for people who are otherwise unemployable. Such programs contribute not only to the economic health of the community through increased jobs and revenues, but also aid people who otherwise would need an array of social services at the taxpayers' expense. Two-year colleges are ideal settings for providing the mix of training and education needed by people who lack work experience or basic academic and work skills. The involvement of the firms that eventually will employ such people is critical to the success of the program.

JTPA program administrators and economic development officials should continue to use JTPA funds to provide training and education via two-year colleges. Economic development efforts should incorporate training for people whose lack of basic skills, work skills, and work habits hinders their employability.

Recommendations

Development agency and group leaders should:

- o recognize the role that training plays in the economic development process and support the development of a flexible training capacity statewide;
- o incorporate the training capacity of state and local institutions into business attraction and retention efforts, advising employers of what two-year colleges have to offer them;
- o encourage cooperation among two-year colleges, industry, labor unions, and state and local agencies to mount trainin programs to retain local businesses and the jobs they provide; and
- o explore with other state policy makers innovative mechanisms to tap and package new sources of funds for training as an economic development activity.

Community college administrators should:

- o continue and expand their relations with industry to provide customized training that meets firms' needs;
- o continue and expand their offerings in remedial education and employability development, coupling these with occupational skill training, to prepare disadvantaged persons for employment; and
- o work cooperatively with economic development agencies to include training packages in industrial development and retention schemes.

Business leaders should:

- o take advantage of the training capacity available locally to upgrade the skills of present employees and train potential employees for jobs;
- o collaborate with training institutions by providing equipment and instructors to ensure that training is completely up-to-date;
- o work with JTPA's Private Industry Councils and their training providers to ensure that training offerings meet the needs of the workplace; and
- o inform business colleagues of their successful ventures with two-year colleges and spread the word about what schools have to offer to business.

6. The Triangle Benefits All

Clearly, two-year colleges, as part of a vital economic development triangle, have a proven track record in promoting economic investment and generating job opportunities. The number of program examples cited here could be multiplied many times. The colleges can offer comprehensive assistance and services that business and industry need to remain strong and to grow. Obviously, different areas need different types of programs. Through the locally focused two-year colleges, programs can be developed to fit local needs precisely. **Local economic development groups can and should develop recovery and growth strategies and plans that include two-year colleges that can serve local needs.**

Statewide efforts can use the local colleges in statewide systems to deliver economic development resources targeted to local needs. Such programs can tap the resources of all kinds of educational institutions. Collaboration among two-year colleges, high schools, four-year institutions, and special purpose institutions can provide the whole array of services required for a comprehensive economic growth strategy; all of these institutions and non-educational organizations have very important roles to play in these efforts. This report has stressed distinct ways two-year colleges can serve economic development needs.

Mutual Effort/Mutual Benefit

The economic development triangle requires the efforts of all the partners to create a successful program. But the collaboration also brings major benefits to each of the partners, and the communities they serve.

For public and private economic development agencies and organizations, the benefits include:

- adding an important resource to their economic development efforts;
- providing additional incentives for businesses to expand existing operations or open new ones;
- adding to the tax base through new or expanding businesses and the employment of more workers;
- increasing jobs and incomes in the state or community;
- receiving assistance to encourage entrepreneurship and the development of small business;
- obtaining survey information and a data base on which to build an economic development strategy; and
- gaining an opportunity to attract new and revamp existing businesses and industries that rely on new technologies.

Business and industry benefit by:

- receiving high-quality, low-cost training and other services;
- obtaining a work force trained to fill their particular needs;
- taking advantage of a local resource for business information, support services, marketing, and consulting;
- expanding the small business base in the community;
- strengthening the overall local economy and business community; and
- gaining access to technology that otherwise would not be available at the local level and having employees and managers trained in the use of that technology.

The benefits to two-year colleges include:

- contributing to an expanded tax base;
- providing jobs at the college;
- placing graduates in jobs;
- developing training and retraining opportunities;
- gaining an ongoing continuing education opportunity;
- finding other sources of equipment needed to maintain up-to-date training programs;
- developing entrepreneurial/consulting opportunities for faculty;
- gaining a new source of corporate gifts and contributions;
- creating a source of new full-time and part-time students; and
- bolstering the overall strength of the institution.[59]

Notes

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